

REMARKS

Entry of the foregoing, re-examination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.116, and in light of the remarks which follow, are respectfully requested.

Claim 1 has been amended pursuant to issues discussed during an interview with the Examiner. Claim 12 has been amended to remove the phrase beginning with the word "preferably." The removed subject matter has been presented as new claim 26. Claims 1-26 are now pending with claim 3 being indicated as allowable. Entry of this amendment is respectfully requested since it places the application in allowable condition or better condition for appeal.

Applicants acknowledge the personal interview held on July 29, 2003, between the Examiner, Dr. Zalukaeva, and their U.S. Representative. The Examiner's courtesy and helpful suggestions are acknowledged with appreciation.

Turning to paragraph (3) of the Office Action, the Examiner has requested clarification of amendments to claim 3. Applicants point out that claim 3 was amended in the Response filed February 3, 2003, to add commas after "PET" and "radical."

Claims 1, 2 and 4-25 were rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,252,615 to Rao et al for the reasons set forth in paragraphs (5) and (7) of the Office Action. Reconsideration of this rejection is respectfully requested in view of the above amendments and for at least the following reasons.

The presently claimed invention relates to acrylate or methacrylate binders comprising oligomers of formulas (I) and/or (II) as defined in claim 1. The binders are prepared by reacting hydroxy-terminated aromatic polyester oligomers with acrylic or methacrylic acid to esterify the hydroxy groups and yield prepolymers with ethylenic unsaturation. The prepolymers can be cured to provide adhesives, coatings, floorings and other products having excellent mechanical properties and weather and chemical resistance.

Rao et al '615 discloses the preparation of hydroxy-terminated aromatic polyester oligomers. The hydroxy functions can be further reacted with carboxylic acids. The list of suitable acids set forth in column 6, line 63 to column 7, line 41 is conspicuous by the absence of any α,β -ethylenically unsaturated monocarboxylic acids, let alone acrylic or methacrylic acid. The Examiner has referred to column 9, line 10 of the reference and suggested that the phrase "direct acrylic modification" encompasses the esterification products claimed by Applicants. Respectfully, Applicants disagree.

An example of the direct acrylic modification contemplated by Rao et al '615 is described in Example VI of this patent (column 11 thereof). In this Example, an ethylenically unsaturated monomeric mixture including methacrylic acid is addition polymerized using τ -butyl perbenzoate initiator in the presence of the resin of Example III. The latter is a reaction product of a hydroxy-terminated aromatic polyester oligomer containing ethylenic unsaturated residues (from trimethylolpropane diallyl ether) with trimellitic anhydride and linoleic fatty acids and has an acid value of 82. Any reaction

which occurs between methacrylic acid and the esterified ethylenically unsaturated resin of Example III is not an esterification but addition polymerization.

Rao et al '615 incorporated by reference two U.S. Patents, Nos. 4,735,995 (Chettiath) and 4,873,281 (Maska) as examples of typical direct acrylic modification. However, the modifications described in these patents are similar to that in Example VI of Rao et al '615, i.e. addition polymerization of acrylic or methacrylic acid in the presence of esterified polymers which do not appear to be hydroxy-terminated aromatic polyester oligomers.

The procedure disclosed in Maska '281 involved preparing an aqueous dispersion of a saturated polyester and an acrylic resin by polymerizing an acrylic acid in the presence of a saturated polyester and an initiator such as τ -butyl perbenzoate. The acrylic acid is addition polymerized to form the desired blend of the two polymers. There is no disclosure in Maska '281 of an esterification reaction between the acid and the polyester nor any suggestion that such a reaction occurs or would be desirable.

The direct acrylic modification disclosed in Chettiath '995 involves addition copolymerization of acrylic monomers with a polyester prepolymer formed by reacting the hydroxy functions of a styrene-allylic alcohol copolymer with mixtures of unsaturated fatty acids and other carboxylic acids. The polyester prepolymers have acid values of at least 25 (column 5, line 24). The ethylenic unsaturation in the polyesters is designed to react with the unsaturation of acrylic monomers (column 6, lines 32-35). The ethylenically unsaturated polyesters are admixed with acrylic monomers such as methacrylic acid in the

presence of polymerization initiators such as dibutyl peroxide and addition polymerization takes place. There is absolutely nothing in the disclosure of Chettiath '995 which suggests esterification between the polyester (which doesn't appear to have any residual OH groups) and methacrylic acid, let alone any suggestion that this would be desirable since copolymerization is intended.

Based on the above discussion, Applicants submit that there is no evidence to support the argument that "direct acrylic modification" includes esterification of acrylic or methacrylic acid with the terminal hydroxy functions of aromatic polyester oligomers. To the contrary, the disclosures of Rao et al '615, Maska '281 and Chettiath '995 clearly indicate that "direct acrylic modification" refers to addition polymerization of acrylic monomers in the presence of polyesters to form resin mixtures and/or copolymers thereof.

During the aforementioned interview, Applicants agreed to emphasize these distinctions by amending claim 1 to specify that the binders of the invention are formed by esterification of at least one hydroxy-terminated aromatic polyester oligomer with acrylic or methacrylic acid. Rao et al '615 does not constitute an anticipation of claim 1, as currently amended. To be anticipatory, "The identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226,1236, 9 U.S.P.Q.2d 1913,1920 (Fed. Cir. 1989). Note MPEP §2131.

For at least the above reasons, the §102(b) rejection over Rao et al '615 should be withdrawn. Such action is earnestly requested.

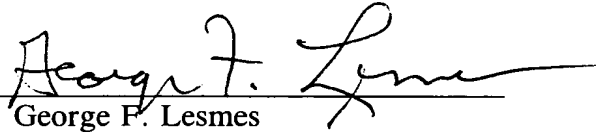
From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at (703) 838-6683.

Respectfully submitted,

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